-continued

<210> SEQ ID NO 5
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: HS Albumin-R

<400> SEQUENCE: 5

ggattctgtg cagcatttgg 20

<210> SEQ ID NO 6
<211> LENGTH: 16
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: HS Albumin

<400> SEQUENCE: 6

tgaaccagtt atgtgt 16

<210> SEQ ID NO 7
<211> LENGTH: 16
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Albumin Gene Specific Taqman Probe

<400> SEQUENCE: 7

tgaaccagtt atgtgt 16

What is claimed is:

1. A method of preparing FV vector particles, comprising the steps of:

a. transfecting a population of eukaryotic cells by contacting said population of eukaryotic cells with one or more transfection reagents to form a transfection mixture, and incubating said transfection mixture to form a transfected cell population;

b. harvesting said FV vector particles from said transfected cell population, wherein said harvesting step is carried out about 70 hours to about 100 hours, or about 70 hours to about 90 hours, or about 70 hours to about 80 hours, or about 72 hours to about 75 hours, post-transfection;

c. purifying said FV vector particles;

d. concentrating said FV vector particles.

2. The method of claim **1** wherein said population of eukaryotic cells are pre-seeded for about 20 to about 30 hours, or about 24 hours, prior to said transfecting step.

3. The method of claim **1** wherein said pre-seeding is carried out until said population of eukaryotic cells achieves a cell density of from about 1×10^5 cells/cm^2 to about 2×10^5 cells/cm^2 or about 1.8×10^5 cells/cm^2.

4. The method of claim **1**, wherein said pre-seeding step comprises the step of plating eukaryotic cells 1 day prior to PEI transfection with fresh media.

5. The method of claim **1** wherein said pre-seeding step comprises adding poly-L-lysine in an amount sufficient to pre-coat tissue culture plastic with about 3.5 to about 10 mL per 225 cm^2 surface area, preferably at a concentration of about 0.01%.

6. The method of claim **1** wherein said one or more transfection reagents comprise vector plasmid and a plasmid comprising codon optimized pCiGAGopt.

7. The method of claim **1** wherein said transfecting step occurs in the presence of about 10% (vol/vol) fetal bovine serum and about 0.4% (vol/vol) PEIPro.

8. The method of claim **1**, wherein said transfecting step occurs in the presence of about 10% fetal bovine serum and calcium phosphate, butyrate, and chloroquine.

9. The method of claim **1**, wherein said transfection mixture is incubated for about 10 to about 20 minutes at ambient temperature (20-24° C.), preferably for about 10 minutes.

10. The method of claim **1**, wherein said transfection mixture is maintained in the initial media until the day of harvest.

11. The method of claim **1**, wherein the pH of said transfection mixture is less than about 8.

12. The method of claim **1** wherein said FV vector particles is subjected to a filtration step.

13. The method of claim **1** wherein said transfected cell population is contacted with benzonase at a concentration of from about 50 to about 200 U/mL, preferably about 50 U/mL in the presence of about 10 mM $MgCl_2$ for a period of from about 2 to about 6 hours, preferably about 4 hours prior to a filtration step in one instance, and for 16 to 40 hours prior to vector harvest in another.

14. The method of claim **1** further comprising the step of isolating said FV vector particles using a heparin column.

15. The method of claim **1** further comprising the step of concentrating said FV vector particles using tangential flow filtration.